MARKET STREET SUBWAY STATIONS

A SPUR REPORT - DECEMBER 1964

PURPOSE OF THE REPORT

As a citizens' organization concerned with city planning and development in San Francisco and its environs, SPUR feels the location and design of Market Street stations to be especially important. For many people they will constitute the vestibule of the city, and they will strongly influence the development of Market Street.

For this reason, this report is designed to bring attention to the benefits of achieving the maximum potential of the subway concourses both in function and design. The text, drawings, and photograph illustrate the problem and present concepts for solutions. These are not plans and proposals, but schemes which are being carefully studied and further developed in detail by the Market Street Task Force. It is hoped that this report will bring greater understanding and support to the official efforts being made to achieve an outstanding situation on Market Street, and to demonstrate the advantages that can come to the private property owners, to the merchants, and to the general public.

Quality always costs more initially, but proves economically sound in the long run. SPUR believes we must judge the final plans in long range perspective.

BACKGROUND

A SPUR committee reviewed the preliminary proposals for Market Street as reflected in Sketch I. Five Market Street stations are planned. Two serve the Municipal Railway Company; three accommodate both Rapid Transit and Muni. They are about 700 feet long, and are spaced 2000 to 2500 feet apart along the center of the street.

One station design will be adapted to suit the varied Market Street access conditions. The plan shows a long rectangle, symmetrical about both center-lines, with major access at the center and quarter-points of the long sides. Various appendages - tunnels, ramps, and stairs - will connect this basic box to the street-level entrance locations finally selected.

As shown in Sketch I, the stations have three levels - the Concourse or ticketing level, below it the Muni level, and deepest, the Rapid Transit level. The "roof" of the station in the current design is below the existing layer of street utilities, with the result that the floor of the Concourse is some 28 or 29 feet below the street, and the Rapid Transit platform is about 60 feet underground. Vertical circulation from street to Concourse is by escalator, except where traffic volume would not justify the additional expense over stairways. The Concourse is connected by escalator to the lower levels.

Not incorporated in the Sketch I design is the 1962 suggestion that the Concourse should be opened to the sky and related to store basements when streetcar service is relocated underground. Instead the Concourse floor is indicated at approximately 14 to 16 feet below existing basements. This was based on the assumption that maintaining utilities in place in the center of the street was necessary.

GOALS

In reviewing the existing design proposals, it became clear that the proposals did not reflect an adequate set of criteria. Included in such criteria should be the following:

1. Design of stations must be coordinated with fully-studied local public transit systems and pedestrian activity.

2. The local transit system must be integrated with Market Street needs.

3. Stations should have the shallowest possible depth below ground and the maximum openness to the sky.

4. Users of the system should have the shortest possible underground walk to reach their trains.

5. The Concourse should perform as many functions as possible: pedestrian street crossing, building entrance, shopping level, etc.

6. The Concourse should have the smallest possible area for paid, "ticketed" people in proportion to the multi-use "unticketed" space.

7. During late-night hours the space accessible to the public should be reduced to a minimum by sliding gates or other means, and plans should eliminate hidden unsupervised areas.

8. Although the same functional diagram can describe each station, the stations should be adapted to make the most of present and foreseeable opportunities in each location.

These principles, applied to the design problem, lead to the following conclusions.

LOCATIONS

Station locations correspond generally to Market Street's five functionally distinct sectors, and relate well to the anticipated load distribution. Adjustments to opportunities and problems will certainly be necessary. However, such adjustments will be needed at the Concourse level, rather than the train levels below. The current

scheme (Sketch I) is adaptable only by awkward appendages to the three-story basic box. It seems necessary to develop a scheme in which the Concourse may be varied to suit street-level needs, with relative independence from an unvaried two-level box below. Sketches II, III, and IV, and the study model show such possibilities.

STATION AND DESIGN POSSIBILITIES

Market Street subway stations can be made much more attractive and easier to use than the deeper stations currently being engineered which will not benefit from natural light. A broad Concourse just below the street can open to sunken plazas. Relating closely to office, retail, cultural, and hotel life, it becomes a vitalizing element in the city.

Such a Concourse can be used for retail display and sales, including small shops, food kiosks, and newspaper and magazine stands. These amenities, adjacent to Rapid Transit ticketing, will greatly enhance both the regional Rapid Transit and the city-wide Muni systems for their users. The Concourse also provides basement shopping access to street-level stores and serves as a much-needed street crossing.

During late-night hours the accessible area can be small and central, as shown on the study model, for easy surveillance and safety of the users. Throughout the day however, the Concourse can connect to the lobbies of office buildings and hotels, store basements, small urban green spaces, sunken plazas, courts between buildings, and street level kiosks.

KEY TO THE PROBLEM

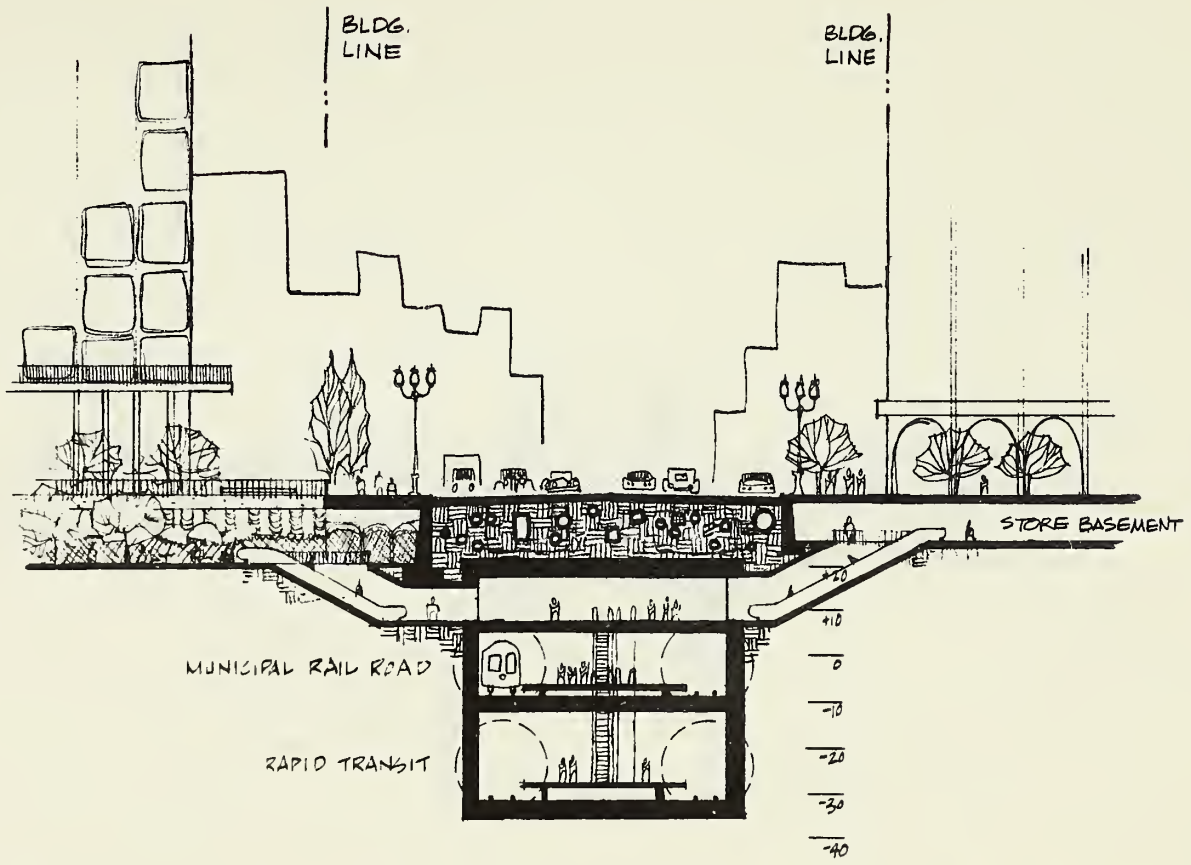
What stands in the way of this concept? Utility lines under the street would have to be relocated. They could be grouped more compactly along the center-line of the street (Sketch III), or placed in concrete ducts under the sidewalk (Sketch IV), or, as shown in Sketch II and the model, under the pedestrian mezzanine. There could also be any combination of these, determined by the particular situation at each station. The under-sidewalk location, if found feasible, would permit a reduction of about 14 feet in the depth of the station, effecting enormous savings in construction cost. It could also greatly facilitate excavation of the station areas. Concrete ducts for pipes and conduits offer the bonus factors of longer life, fewer repairs, earthquake protection, and easy access for changes. However, the problem of possible gas and water leaks would have to be thought out.

In any event, by relocating utilities, the transit-user's climb from Concourse to street can be reduced from about 28 feet to 12 or 15 feet. Many more entrances can be created. Daylight can illuminate the station interior, and possibly even the Muni level. In some cases, plastic bubbles can keep out inclement weather while permitting natural light, such as in the Marin County Civic Center building. Outside contact - to sun, plants, plazas, and stores - can be maintained. If the subway is to succeed, it must be accepted in preference to private-auto commuter trips. The daylit Concourse concept should help BARDT, Muni, and the City to obtain enthusiastic acceptance of the system.

THE NEED FOR ACTION

Working to a tight and demanding schedule, BARTD is understandably concerned about any basic changes in station design. The review committee has, however, satisfied itself that the changes in concept discussed in this report - namely, daylit Concourse, two-level transport "box", relocated utilities in easily accessible groups - are feasible, desirable, and can be made if vigorously pursued now.

(This report was made possible by the voluntary services of Edward Farrell, AIA, chairman of the SPUR Environment and Design Committee, and Gerald J. McLindon, executive director of the Market Street Development Project. Design drawings were prepared by Christopher Layton.)



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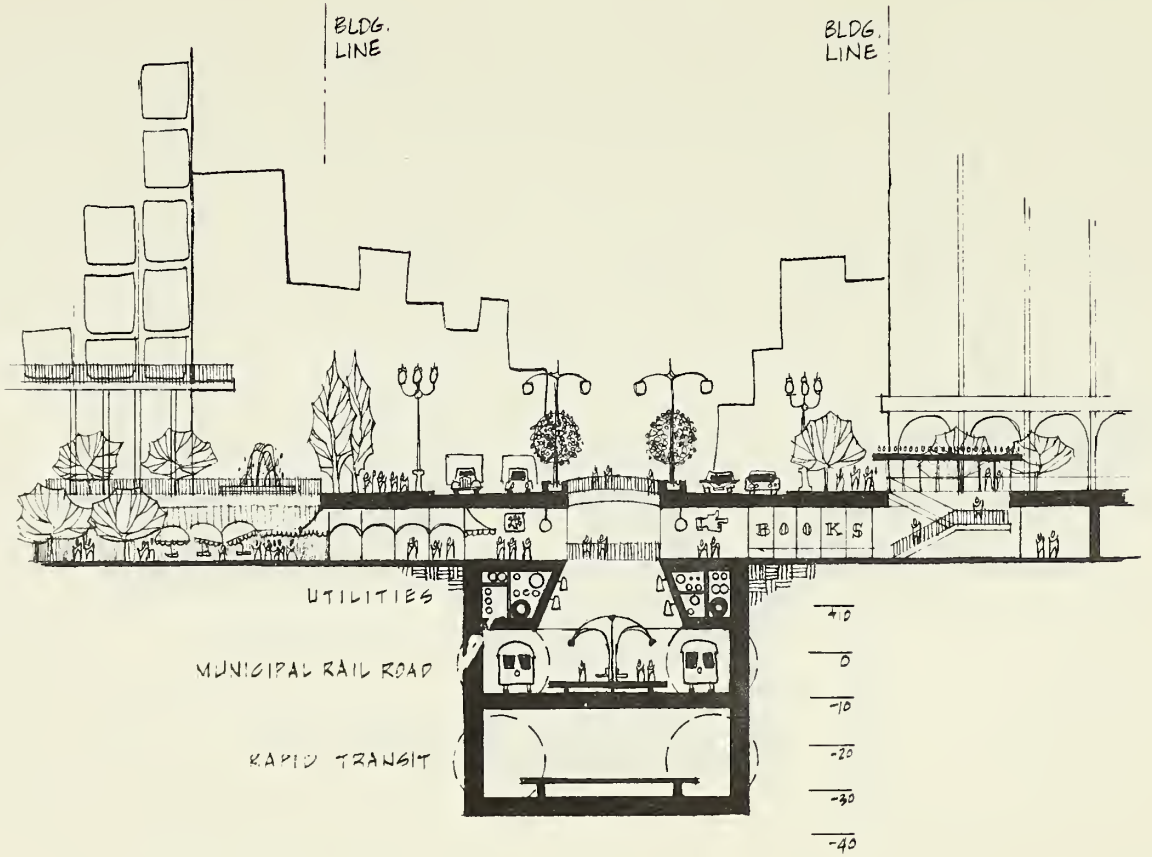
SCALE IN FEET

SKETCH

BY: SPUR'S ENVIRONMENT & DESIGN COMMITTEE

DATE: DECEMBER 1964



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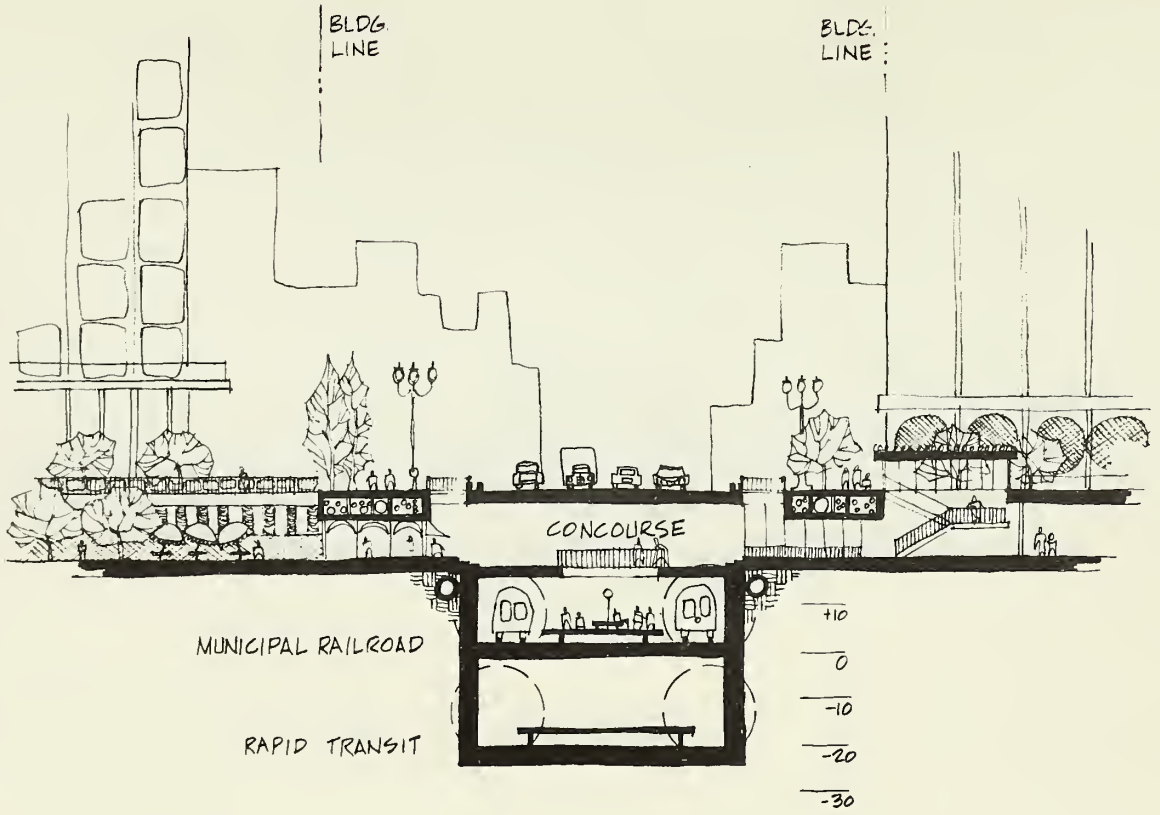
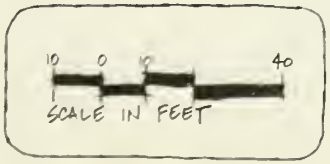
BY: SPUR'S ENVIRONMENT & DESIGN COMMITTEE

DATE: DECEMBER 1964





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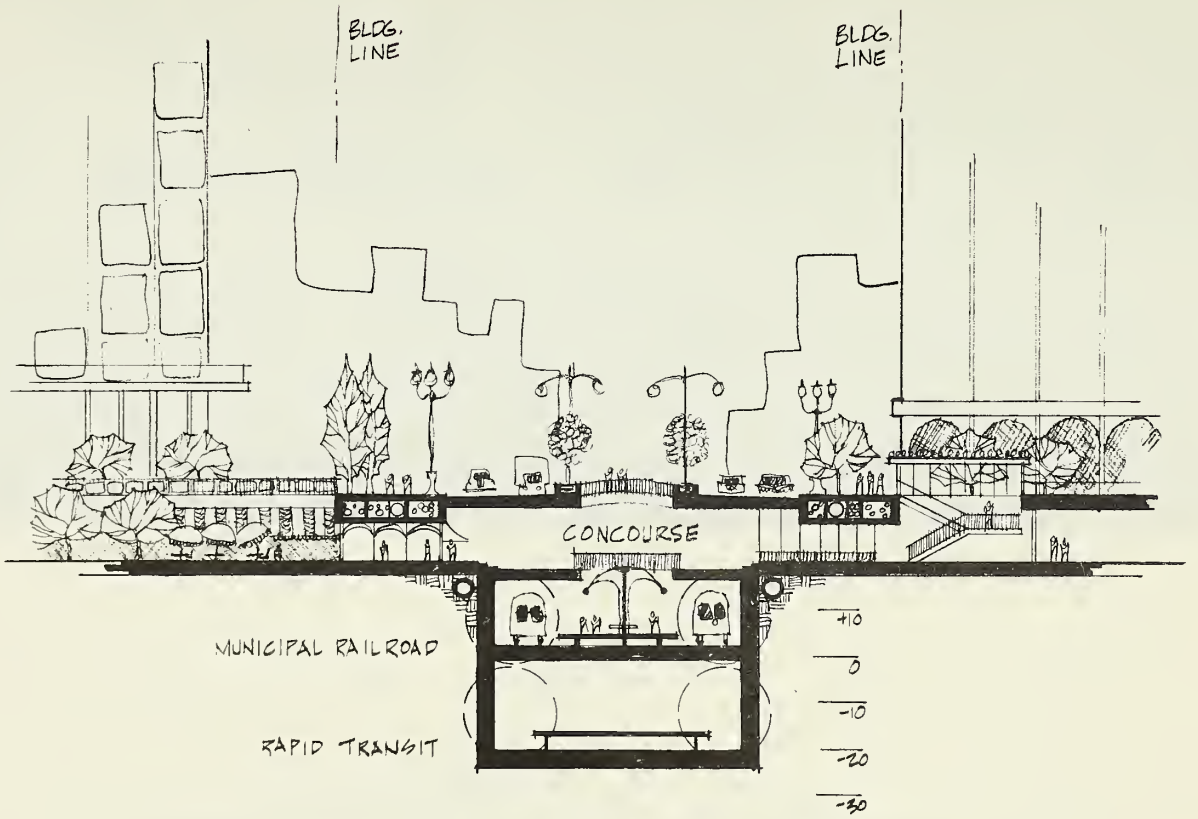

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SKETCH IV

BY: SPUR'S ENVIRONMENT & DESIGN COMMITTEE

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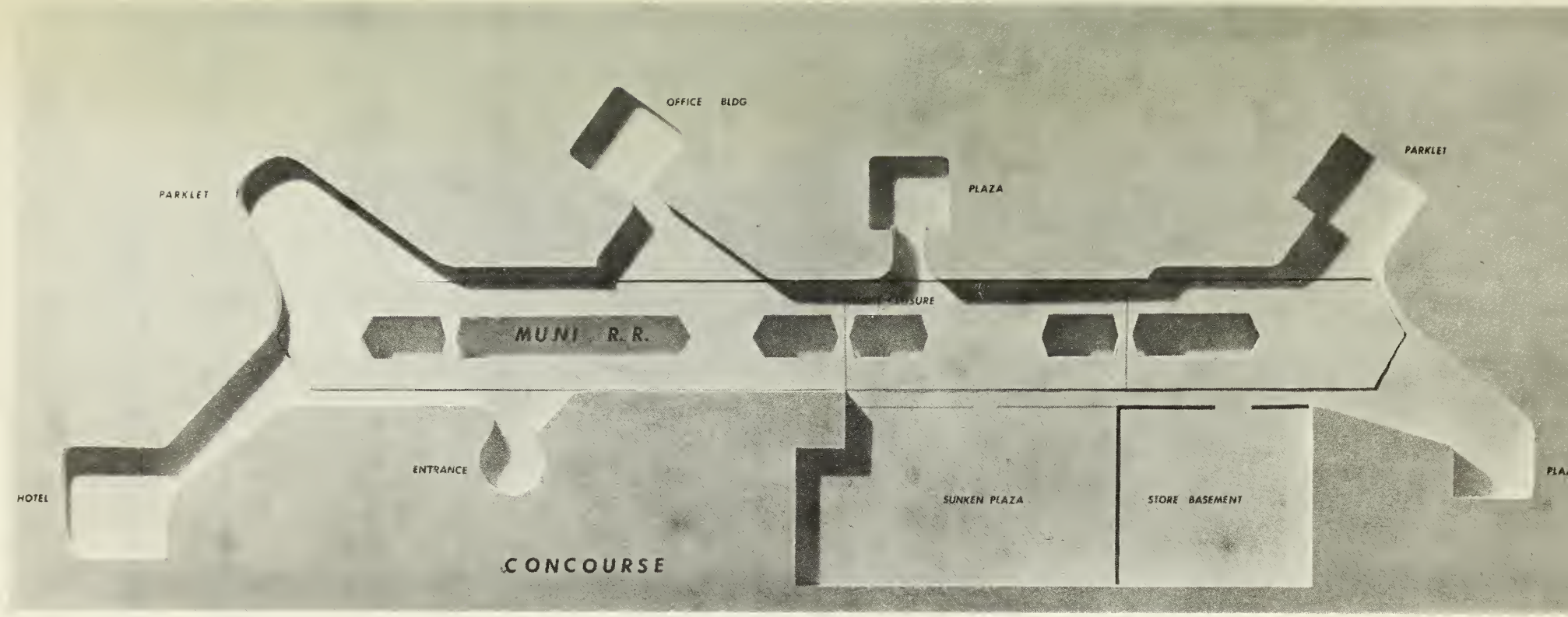
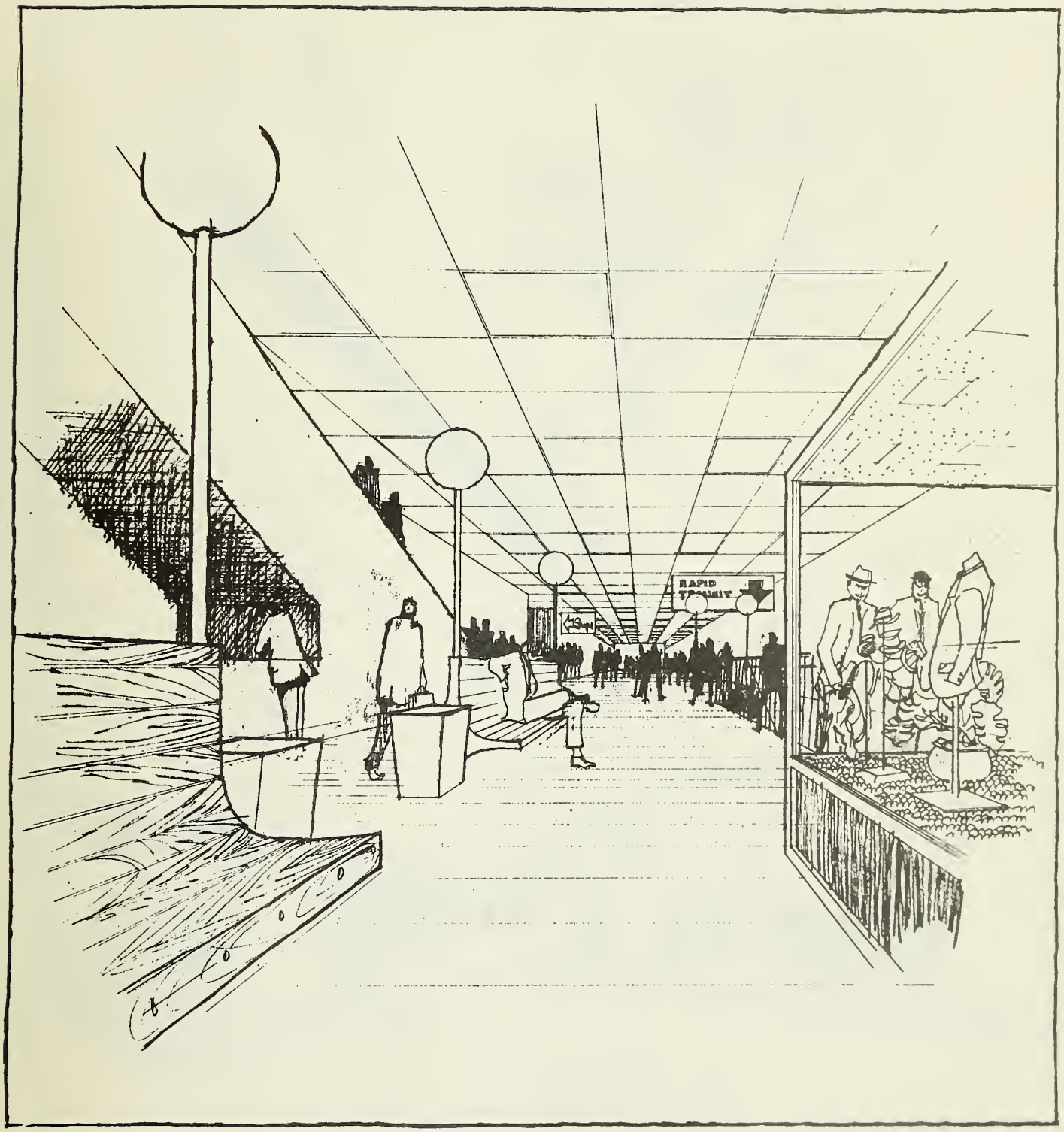
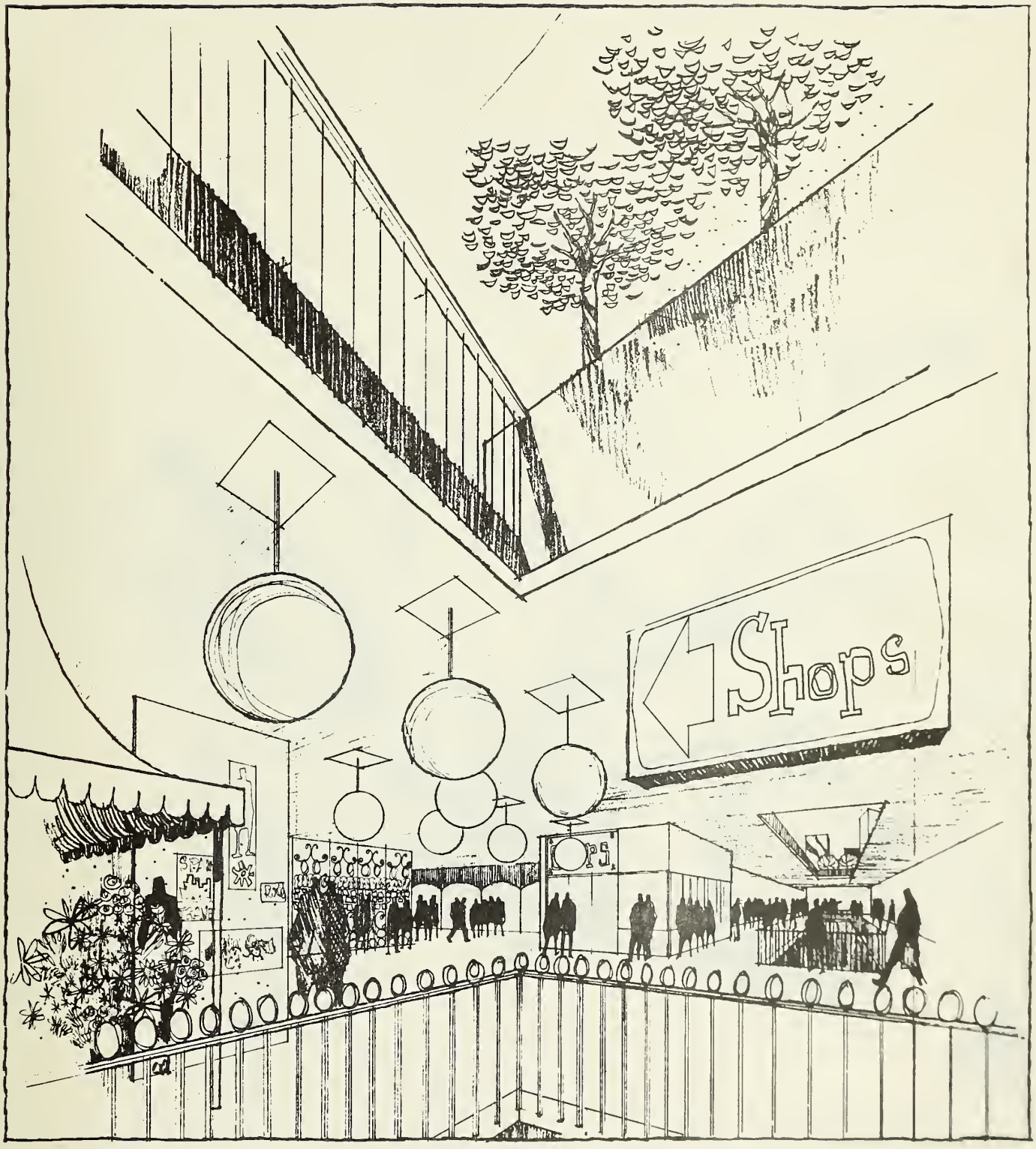


PEDESTRIAN CONCOURSE OF A MUNI-RAPID TRANSIT STATION

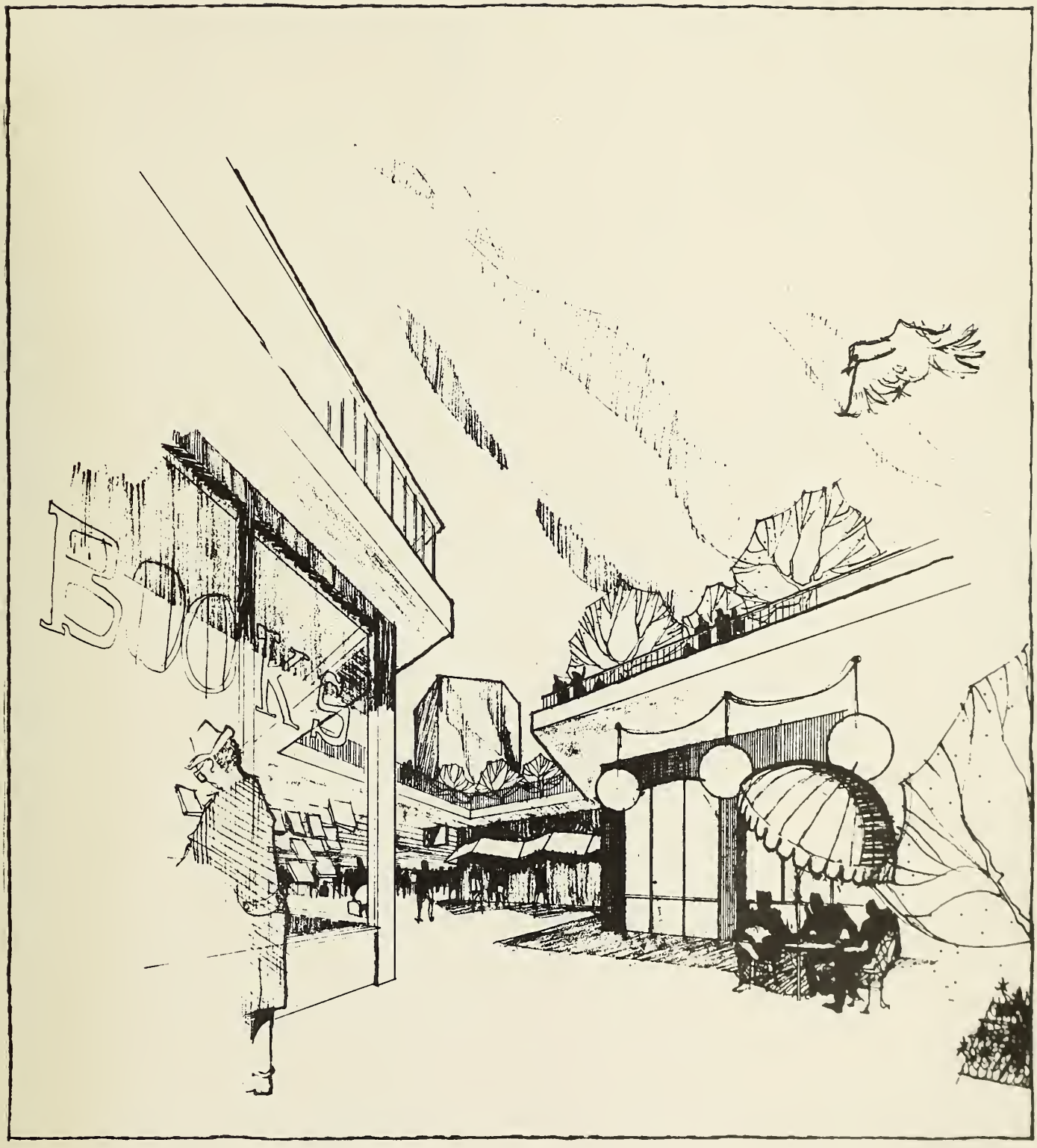
In this aerial view of a model of a hypothetical station , the Market Street level has been removed to show the relationship of the concourse to adjacent



PEDESTRIAN CONCOURSE OF SUBWAY - WITHOUT DAYLIGHT



PEDESTRIAN CONCOURSE OF SUBWAY - WITH DAYLIGHT



SUNKEN PLAZA ON PRIVATE PROPERTY, ADJACENT TO PEDESTRIAN CONCOURSE